

What is claimed is:

1. A method for increasing the natural mutation rate of organisms, particularly, prokaryotes by culturing or growth of said micro-organisms in media utilizing thio-phosphate as a source of phosphorous.
- 2 The method of claim 1 used to selectively mutate phage or plasmid DNA comprising:
 - 1) several rounds of phage or plasmid amplification with host cells
cultured in the presence of thio-phosphate containing media
 - 2) harvesting the phage or plasmid DNA after each cycle of amplification
 - 3) infecting or transforming new host cells after each cycle of amplification.